REMARKS

Claims 1, 2, 4-9, 11, 14, 15 and 16 are pending. Claims 1, 5, 8, 15 and 16 are the only independent claims. Claim 1 has been amended. Claim 16 has been added to provide Applicant with a more complete scope of protection. Claims 3, 10, 12 and 13 have been canceled without prejudice.

Claims 1 and 2 were rejected under 35 U.S.C. § 102(e) over U.S. Patent 6,330,675 (Wiser). Claims 3, 5, 6, 8-10 and 15 were rejected under 35 U.S.C. § 103 as obvious from Wiser in view of U.S. Patent 4,157,454 (Becker). Claims 4, 7 and 11-14 were rejected under 35 U.S.C. § 103 as obvious from Wiser and Becker and further in view of U.S. Patent 5,920,627 (Mionet). Applicant submits that the independent claims are patentable for at least the following reasons.

Claim 1 is directed to a data transmission system that includes calculation means for performing calculation using a variable on an original data stream read from a recording medium so as to produce a calculated data stream; variable creation means for creating the variable; a stream buffer for temporarily storing the calculated data stream therein; inverse calculation means for performing inverse calculation on the calculated data stream output from the stream buffer by using the variable so as to reproduce the data stream; stream processing means for processing the reproduced data stream to produce a processed data stream; and output means for outputting the processed data stream. The variable is changeable at either a regular or a random timing.

The Office Action cited Wiser as teaching various features of the claim. In connection with claim 3, the Office Action recognized that Wiser contains no teaching of changing the variable at an arbitrary timing. In an attempt to remedy this deficiency, the Office Action relies upon Becker.

Wiser relates to a system that allows a home computer user to download a music file over the Internet and make a CD-ROM copy of it. The system ensures that the file cannot be accessed and/or copied, without authorization, either during transmission on the Internet, or in the computer at the user's home computer. This is achieved by a multi-step process that uses highly secure encryption and compression at the initial stage at which the music is downloaded to the user's computer over the Internet. Once in the computer of the user, the downloaded file is decrypted and decompressed and then encrypted again, with a somewhat less secure encryption algorithm, the less-securely encrypted file being stored as an intermediate file in local storage medium 212. Then, the intermediate (less securely) encrypted file is decrypted, in piecemeal fashion, via temporary storage in local memory 216, before being sent to the recording device, which records a CD-ROM that the user can use to listen to music.

As is described in Wiser et al., there is a delicate balance between the speed required to perform the decryption and the speed of recording the CD-ROM. That is, writing to CD-ROM requires a steady flow of data. If the source file on the hard drive in Wiser, which is the securely encrypted original downloaded file, was written directly to the CD-ROM, the encryption and compression algorithms used to create the source file would be limited to those that could be decrypted and decompressed quickly enough to support the minimum data flow rates required for writing to the CD-ROM medium. Col. 5, lines 8-20. However, Wiser uses a multi-step process, using the intermediate file, with somewhat less secure encryption level, in combination with piecemeal decryption, to ensure that decryption is carefully timed to meet the steady flow of data required for recording to the CD-ROM.

In the Office Action, the position was taken that it would have been obvious to have modified the Wiser system to add an encryption variable that changes at an arbitrary timing. Applicant strongly disagrees. As discussed above, Wiser relies upon a particular combination of a highly securely encrypted source file and a somewhat less securely encrypted intermediate file, in combination with piecemeal processing, to provide the precise timing

9

required to provide the necessary steady flow of data to the CD-ROM. There would be no motivation whatsoever to add a change of variable at an arbitrary timing to the combination of encryption techniques taught by Wiser.

In fact, the use of a variable that changes, either at a regular timing, or at a random timing, would only complicate the delicate balance achieved by Wiser and in fact would require compensation in the other of the two encryption algorithms (that is, the algorithm other than the one the Examiner is proposing to add the changing variable to) to ensure that the required steady rate of data be delivered to the CD-ROM.

The Office Action's reasoning seems to be based in part on the assumption that more security is always to be desired. However, Wiser relies upon a *balance* between levels of security, in combination with piecemeal calculation, to ensure the required timing of data delivered to the CD-ROM. There would be no motivation to make the system more secure simply for the sake of increased security, especially in view of how that might upset the balance achieved by the Wiser system. Moreover, adding the recited changing of the variable would change the principle of operation of Wiser, working against the design goals set forth in the description of that system.

Moreover, in the Office Action it appears that the Examiner is reading the recited calculation means on the encryption engine 210, i.e., the encryption engine that supplies the *somewhat less secure* algorithm to form the intermediate file. However, as Wiser makes clear, the security level of this algorithm is selected so that the proper data rate can be applied to the CD-ROM recorder. For this reason, the encryption engine 210 supplies a somewhat less secure encryption than that applied to the source file received over the Internet. There would certainly be no motivation whatsoever to increase the security at the encryption engine 210 by adding a variable that changes either at a regular or random timing when: (1) a somewhat *less* secure algorithm is what was desired; and (2) the timing of decryption from the intermediate file needs to be precisely matched with rate at which the CD-ROM recorder can accept data. If the variable used for encryption in the encryption engine 210 keeps changing, the design

would have to be made much *more complicated* to maintain the steady supply of data to the CD-ROM.

For at least the foregoing reasons, there would be no motivation whatsoever to add a variable that changes at either a regular or a random timing to the Wiser system. In fact, one of ordinary skill in the art would be dissuaded from doing so by the goals of the Wiser system.

The Examiner relied on a similar incorrect assumption in rejecting independent claims 5, 8 and 15. As discussed above, there is no motivation for modifying Wiser to meet the features of the independent claims relating to the calculation variable. Each of independent claims 5, 8 and 15 is believed patentable for reasons similar to those discussed above in connection with amended claim 1.

New claim 16 is directed to a data transmission system comprising: calculation means for performing calculation using a variable on an original data stream read from a recording medium so as to produce a calculated data stream, variable creation means for creating the variable, a stream buffer for temporarily storing the calculated data stream therein, inverse calculation means for performing inverse calculation on the calculated data stream output from the stream buffer by using the variable so as to reproduce the data stream, means for supplying the variable to both the calculation means and the inverse calculation means, stream processing means for processing the reproduced data stream to produce a processed data stream, and output means for outputting the processed data stream. The variable used by the inverse calculation means is updated in conformity with a variable update timing inserted into the data stream.
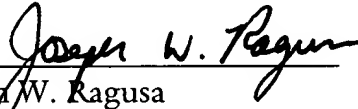
Among the features of new independent claim 16 not taught or suggested in the cited art are the means for supplying the variable to both the calculation means and the inverse calculation means, and the updating of the variable used by the inverse calculation means in conformity with a variable update timing inserted into the data stream.

The other claims in this application are each dependent from one or another of the independent claims discussed above and are therefore believed patentable for the same reasons. Since each dependent claim is also deemed to define an additional aspect of the invention, however, the individual reconsideration of the patentability of each on its own merits is respectfully requested.

In view of the above, each of the presently pending claims in this application is believed to be in immediate condition for allowance. Accordingly, the Examiner is respectfully requested to pass this application to issue.

Dated: July 15, 2004   Respectfully submitted,

By _____
Joseph W. Ragusa
    Registration No.: 38,586
DICKSTEIN SHAPIRO MORIN &
    OSHINSKY LLP
1177 Avenue of the Americas
41st Floor
New York, New York 10036-2714
(212) 835-1400
Attorney for Applicant